

TARGET-SETTING WITH DATA GUIDANCE DOCUMENT

This guidance document contains examples of how to use historical statewide student performance data made available in the assessment reports to set high-quality goals and targets for student growth. Educators are encouraged to use all available data in the goal-setting process—this includes data from prior years, as well as other available student performance data.

Additional goal-setting resources, including the assessment reports, can be found by visiting www.tinyurl.com/ddoe-gs-suite.

COMMONLY-USED APPROACHES TO SETTING TARGETS

This document highlights three commonly-used approaches to setting targets: 1) A class average approach—In this approach, an educator compares the class average in the spring with the class average in the fall to demonstrate student growth throughout the year, 2) An individualized approach—In this approach a target is set for each student and the percentage of students who meet their targets is calculated in the spring and 3) A tiered approach—In this approach a target is set for groups of students and the percentage of students who meet their targets is calculated in the spring.

A high-quality student growth target is rigorous: ambitious, yet attainable.

Note: The examples included in this document show a class of 10 students for ease of presentation. However, educators are encouraged to include as many students as possible.

Key Terms & Definitions:

- **Targets:** These specify the criteria by which a teacher's final rating of Unsatisfactory, Satisfactory, or Exceeds on this measure will be determined.
- **Class:** The students who are included in the pre and post-test.

EXAMPLE I – CLASS¹ AVERAGE APPROACH

✓ *Step 1: Gather and analyze baseline data (Takes place in Fall)*

Class Tested: Accounting II

Student Count: 10 students

Lowest Pre-Test Score: 1 point

Highest Pre-Test Score: 7 points

Average Pre-Test Score: 4 points out of 24 possible points.

✓ *Step 2: Using available data, set ambitious targets (Takes place in Fall)*

Examples of data that can be used include prior years' student performance, other available assessment data on this group of students, and the assessment reports.

School Year	Average Gain	Std. Dev. of Gain
2012-13	11.2	4.9
2013-14	10.3	6.6
Both Years	10.8	5.8

The table on the left is copied from the assessment report for the Accounting II assessment. This table shows that across the state in school years 2012-13 and 2013-14, students gained on average 10.8 points from the pre-test to the post-test.

The historical data gives the average statewide gain on the particular assessment. An educator can use this as a starting point, but then still needs to decide how to set the Satisfactory and the Exceeds target. The educator may choose to use the standard deviation as a way to differentiate between the Satisfactory and Exceeds target as follows:

Satisfactory gain: $10.8 - 5.8 = 5$ point gain

Exceeds gain: $10.8 + 5.8 = 16.6$ point gain

Note: The 5.8 used above is the standard deviation of the gain obtained from the assessment report.

Final Targets:

- Unsatisfactory: The class average math score will increase by less than 6 points.
- Satisfactory: The class average math score will increase by between 6 and 14 points.
- Exceeds: The class average math score will increase by more than 14 points.

Rationale for targets:

The educator chose to use a higher Satisfactory target and a lower Exceeds target than was suggested by the calculation shown above. This decision could be supported by prior years' student performance data on this Measure B assessment.

¹Or "classes," if an educator is including multiple sections of the same course in the same data point.

✓ **Step 3: Calculate post-test results & determine rating (Takes Place in Spring)**

In the spring, the class post-test average = 11 points (a gain of 7 points from the pre-test)

This teacher would be rated Satisfactory on this Measure based on the goals that were set in the fall.

Pros to Class Average Approach	Cons to Class Average Approach
<ul style="list-style-type: none">- Relatively easy to calculate and understand- Less measurement error than when targets are set for individual students	<ul style="list-style-type: none">- If educator has a high-scoring class, may be more difficult to set rigorous goals- There may be less focus on individual student progress

EXAMPLE II—INDIVIDUALIZED² APPROACH

In the individualized approach, a target is set for each individual student based on historical data. Targets could be the same for each student, or they could be different for each student, or they could be different for groups of students (referred to as the tiered approach—see Example III). The rigor of goals and targets set using an individualized approach can be adjusted by either increasing the target or increasing the percentage of students who need to meet their targets or both.

✓ ***Step 1: Gather and analyze baseline data (Takes Place in Fall)***

Class Tested: Accounting II

Student Count: 10 students

Lowest Pre-Test Score: 1 point

Highest Pre-Test Score: 7 points

Average Pre-Test Score: 4 points out of 24 possible points.

Student	Pre-Test Score
1	5
2	1
3	7
4	5
5	7
6	3
7	3
8	4
9	3
10	1

The scores for each student on the pre-test are shown to the right:

✓ ***Step 2: Using available data, set ambitious targets (Takes Place in Fall)***

Examples of data that can be used include prior years' student performance, other available assessment data on this group of students, and the assessment reports.

School Year	Average Gain	Std. Dev. of Gain
2012-13	11.2	4.9
2013-14	10.3	6.6
Both Years	10.8	5.8

The table on the left is copied from the assessment report for the Accounting II assessment. This table shows that across the state in school years 2012-13 and 2013-14, students gained on average 10.8 points from the pre-test to the post-test.

In this approach, an educator has to make two decisions: 1) the gain for each student and 2) the percentage of students that must meet their targets in order for the educator to earn a Satisfactory or an Exceeds rating.

Final targets:

- Goal: Each student will increase their score by 8 points on the post-test.
- Unsatisfactory target: < 50% of students meet target
- Satisfactory target: 50% - 80% of students meet target
- Exceeds target: > 80% of students meet target

² This can also be thought of as a student-level approach.

Rationale for these targets:

In this example, this educator chose to use a single growth target of 8 points for each student. This decision could be supported by prior years' student performance data on this Measure B assessment.

✓ **Step 3: Calculate post-test results & determine rating (Takes Place in Spring)**

The table below shows the target post-test scores for each student, calculated by adding 8 points to each student's pre-test score. The post-test score represents what the students scored on the post-test in the Spring. The last column shows whether students met their targets.

Student	Pre-Test Score	Target Post-Test Score	Actual Post-Test Score	Target Met?
1	5	13	15	YES
2	1	9	10	YES
3	7	15	15	YES
4	5	13	14	YES
5	7	15	14	NO
6	3	11	11	YES
7	3	11	2	NO
8	4	12	11	NO
9	3	11	6	NO
10	1	9	10	YES

In this example, 6 of the educator's 10 students met their target post-test score, resulting in 60% of targets met for this educator. **This educator would have been rated Satisfactory on this Measure based on the goals that were set in the fall.**

Pros to Individualized Approach	Cons to Individualized Approach
- More focused on the individual student	- Some students may not have much room to grow on the assessment - More calculation needed - More measurement error around gain for each individual student

EXAMPLE III—TIERED APPROACH

This is a variation of the individualized approach, but instead of using the same target for all students, different targets are set for different groups of students. This can be done by grouping students based on their performance on the pre-test. Students can be grouped in quartiles (four groups based on their pre-test scores). They could also be grouped based on natural breaks in their pre-test scores. For example if a large number of students scored at the lower end, and a large number of students scored at the higher end, then it may make sense to form two groups based on their pre-test scores (low and high).

✓ **Step 1: Gather and analyze baseline data**

Class Tested: Accounting II

Student Count: 10 students

Lowest Pre-Test Score: 1 point

Highest Pre-Test Score: 7 points

Average Pre-Test Score: 4 points out of 24 possible points.

Students were placed in three groups based on their scores on the pre-test. Note that a different number of groups could have been selected based on the distribution of student scores on the pre-test.

Student	Pre-Test Score	Group
1	5	2
2	1	1
3	7	3
4	5	2
5	7	3
6	3	1
7	3	1
8	4	2
9	3	1
10	1	1

✓ **Step 2: Using available data, set ambitious targets (Takes place in Fall)**

In this example, the educator chose to divide students into three groups based on their pre-test scores and set target post-test scores based on those groups.

Final targets:

- Goal: Group 1 students will grow by 9 points; Group 2 students will grow by 8 points; Group 3 students will grow by 7 points.
- Unsatisfactory target: < 50% of students meet target
- Satisfactory target: 50% - 80% of students meet target
- Exceeds target: > 80% of students meet target

Rationale for these targets:

The average gains by quartile graph on the assessment report shows that different quartiles had different average gains. In this example, even though the teacher did not use quartiles as shown on the assessment report, the average gains by quartile graph could still be used as a guide to inform the target gains that will be set for students in each group.

✓ *Step 3: Calculate post-test results & determine rating (Takes Place in Spring)*

Student	Pre-Test Score	Group	Target Post-Test Score	Actual Post-Test Score	Target Met?
1	5	2	13	15	YES
2	1	1	10	10	YES
3	7	3	14	15	YES
4	5	2	13	14	YES
5	7	3	14	14	YES
6	3	1	12	11	NO
7	3	1	12	2	NO
8	4	2	13	11	NO
9	3	1	12	6	NO
10	1	1	10	10	YES

In this example, 6 of the educator’s 10 students met their target post-test score, resulting in 60% of targets met for this educator. **This educator would have been rated Satisfactory on this Measure.**

Pros to Tiered Approach	Cons to Tiered Approach
<ul style="list-style-type: none"> - More focused on individual students - Can differentiate targets based on student pre-test scores - Does a better job of accounting for expected growth for students who scored well on the pre-test 	<ul style="list-style-type: none"> - More challenging to calculate - Decisions must be made about how to divide the class into groups, the growth target for the students in each group, and the percentage of students required to meet their growth target in order for the educator to achieve a particular rating

What are some additional resources I can use to set quality targets?

- Look at data from previous years to better inform your targets.
- If administering an internal Measure B Assessment, refer to the assessment report for statewide pre-test, post-test, growth averages, and quartile information on previously administered exams.
- If using a DDOE-approved alternate Measure B assessment, review technical data supplied by the publisher – often in the publisher test kit, or online.
- See if your team, school, or district has any historical results – both on this specific assessment and for each student’s prior performance in the content area.
- If desired, use the Excel Templates provided in the Goal-Setting Suite appropriate to your target-setting method to help calculate growth and determine if your target was met.

Visit www.tinyurl.com/ddoe-gs-suite to see the most updated set of resources.